



MAR 0 4 2015

Mr. Raymond Rodriguez California Resources Elk Hills, LLC PO Box 1001 Bakersfield, CA 93276

Re: Notice of Minor Title V Permit Modification

District Facility # S-2234

**Project # 1144038** 

Dear Mr. Rodriguez:

Enclosed is the District's analysis of your application for minor Title V permit modification for the facility identified above. You proposed a Title V minor permit modification to incorporate recently issued S-2234-126-6, '129-6, '130-5, '131-5, '132-5, '134-5, '136-4 and '137-6 (under project 1143765) into the Title V operating permit. The ATCs are to replace IC engines' daily fuel use limits with an annual fuel use limit.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued S-2234-126-6, '129-6, '130-5, '131-5, '132-5, '134-5, '136-4 and '137-6, emission increases, application, and previous Title V permit. This project will be subject to a 45-day EPA commenting period prior to the District taking final action.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

naud Marjollet

Director of Permit Services

**Enclosures** 

Gerardo C. Rios, EPA (w/enclosure) via email CC:

> Seyed Sadredin Executive Director/Air Pollution Control Officer

#### TITLE V APPLICATION REVIEW

Minor Modification Project #: S-1144038

Engineer: David Torii

Reviewing Engineer: Allan Phillips ASWEADE

Facility Number: S-2234

MAR 0 2 2015

Facility Name:

California Resources Elk Hills, LLC

Mailing Address:

PO Box 1001

Bakersfield, CA 93276

Contact Name: Raymond Rodriguez

Phone:

661-763-6159

Responsible Official: George Gough

Title: HSE Manager

#### 1. **PROPOSAL**

California Resources Elk Hills, LLC (CREH) is proposing a Title V minor permit modification to incorporate ATCs S-2234-126-6, '129-6, '130-5, '131-5, '132-5, '134-5, '136-4 and '137-6 into their Title V operating permit. The ATCs are to replace IC engines' daily fuel use limits with an annual fuel use limit.

The purpose of this evaluation is to identify all applicable requirements, determine if the facility will comply with the applicable requirements and to provide the legal and factual basis for the proposed revisions.

#### II. **FACILITY LOCATION**

The equipment is located in the NW/4 section 20, township 28S, Range 29E in MOC's Heavy Oil Central stationary source, Kern County.

#### III. **EQUIPMENT DESCRIPTION**

S-2234-126-7: 1.834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC

ENGINE DRIVING A GAS COMPRESSOR (R-21) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234 (COMPLIANT DORMANT EMISSIONS UNIT)

S-2234-129-7: 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC

> ENGINE DRIVING A GAS COMPRESSOR (R-27) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO

CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

- S-2234-130-6: 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-28) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234
- S-2234-131-6: 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-29) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234
- S-2234-132-6: 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-30) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234
- S-2234-134-6: 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-32) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234
- S-2234-136-4: 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-34) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234
- S-2234-137-7: 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-35) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234 (COMPLIANT DORMANT EMISSIONS UNIT)

#### IV. SCOPE OF EPA AND PUBLIC REVIEW

This change to a Title V permit is considered to be a minor modification and, as such, requires no public review.

#### V. APPLICABLE REQUIREMENTS

District Rule 2520, <u>Federally Mandated Operating Permits</u> (Adopted June 21, 2001)

#### VI. DESCRIPTION OF PROPOSED MODIFICATIONS

The Changes in the original Permit to Operate and the implemented ATC are as follows

Current PTO#	Condition # on current PTO	Condition is New, Modified, or Removed	Reason for Change from Current PTO
S-2234-126-4	1	removed	Condition required submission of an application for compliance with 40 CFR 63, ZZZZ by October 19, 2012. Unit is not subject to 40 CFR 63, ZZZZ
	2	removed	Condition required submission of a Rule 4702 emission control plan (ECP) by July 1, 2012. ECP has been submitted.
	3 and 4	replaced	Conditions replaced with updated dormant emission unit condition #s 1 through 6
	14	Condition #13 revised	Daily fuel use limit replaced by annual fuel use limit
S-2234-129-5	9	Condition #10 revised	Daily fuel use limit replaced by annual fuel use limit
S-2234-130-4	9	Condition #10 revised	Daily fuel use limit replaced by annual fuel use limit
S-2234-131-4	9	Condition #10 revised	Daily fuel use limit replaced by annual fuel use limit
S-2234-132-4	9	Condition #10 revised	Daily fuel use limit replaced by annual fuel use limit
S-2234-134-4	9	Condition #10 revised	Daily fuel use limit replaced by annual fuel use limit
S-2234-136-2	1	Removed	Condition required submission of an application for compliance with 40 CFR 63, ZZZZ by October 19, 2012. Unit is not subject to 40 CFR 63, ZZZZ
	2	Removed	Condition required submission of a Rule 4702 emission control plan (ECP) by July 1, 2012. ECP has been submitted.
	11	Condition #10 revised	Daily fuel use limit replaced by annual fuel use limit
S-2234-137-3	1	Removed	Condition required submission of an application for compliance with 40 CFR 63, ZZZZ by October 19, 2012. Unit is not subject to 40 CFR 63, ZZZZ
	2	Removed	Condition required submission of a Rule 4702 emission control plan (ECP) by July 1, 2012. ECP has been submitted.
	14	Condition #13 revised	Daily fuel use limit replaced by annual fuel use limit

#### VII. COMPLIANCE

In accordance with Rule 2520, 3.20, these modifications:

- 1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
- 2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
- 3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
- 4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which

the source would otherwise be subject. Such terms and conditions include:

- A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
- An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act: and
- Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
- 6. Do not seek to consolidate overlapping applicable requirements.

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including;

- 1. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
- 2. The source's suggested draft permit; and
- 3. Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used.

# ATTACHMENT A

Proposed Modified Title V Operating Permits

PERMIT UNIT: S-2234-126-7

**SECTION:** 35 **TOWNSHIP:** 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-21) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234 (COMPLIANT DORMANT EMISSIONS UNIT)

## PERMIT UNIT REQUIREMENTS

- {4561} While dormant, the fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District 1. Rule 2080]
- 2. {4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
- 3. {4560} While dormant, normal source testing shall not be required. [District Rule 2080]
- 4. {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
- 5. {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
- {4565} Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
- Permittee shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6]
- 11. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- 12. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- 13. IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 220] Federally Enforceable Through Title V Permit

PERMIT UNIT REPUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN - S-2234-126-7 : Mar 4 2015 1:35PM -- TORID

- 15. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC - 25 ppmv @ 15% O2, CO - 56 ppmv @ 15% O2, PM10 - 0.02 g/hp-hr, or SOx (as SO2) - 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- 16. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 20. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit
- 21. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 22. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702] Federally Enforceable Through Title V Permit
- 23. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months unless the unit is in dormant status. [District Rule 2201 and 4702] Federally Enforceable Through Title V Permit
- 24. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 25. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 26. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) -EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 28. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V, Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-126-7: Mar 4 2015 1:35PM - TORID

- 30. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 31. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 32. Alternate monitoring shall not be required while unit is in dormant status, but shall resume upon recommencing operation of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 33. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
- 34. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 35. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 36. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
- 37. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 38. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 39. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
CES ELK HILLS, LLC

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-126-7; Mar 4 2015 1:35PM - TORID

40. All records shall be maintained, retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4702, 6.2.1 and 6.2.2] Federally Enforceable Through Title V Permit

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Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAS-2234-126-7: Mar 4 2015 1:35PM – TORID

PERMIT UNIT: S-2234-129-7

SECTION: 29 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-27) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

#### PERMIT UNIT REQUIREMENTS

- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6]
- {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC - 25 ppmv @ 15% O2, CO - 56 ppmv @ 15% O2, PM10 - 0.02 g/hp-hr, or SOx (as SO2) - 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D-3031 D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit

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Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, S-2234-129-7. Feb 25 2015 7:53AM - TORID

- 14. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 16. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 17. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate, [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing, [District Rule 1081] Federally Enforceable Through Title V Permit
- 19. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) -EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 21. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 24. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of nongoperation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNITRE DIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA

Location: GAS PLANT,S S-2234-129-7 : Feb 25 2015 7:53AM -- TORID

- 26. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702, 5.6.1 and 5.6.9] Federally Enforceable Through Title V Permit
- 28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 29. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 30. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 31. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 32. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 33. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40] CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the nonstartup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 35. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 36. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 37. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 38. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-129-7: Feb 25 2015 7:53AM - TORID

- 39. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 40. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 41. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 42. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPAN S-2234-129-7: Feb 25 2015 7:53AM - TORIO

PERMIT UNIT: S-2234-130-6

SECTION: 28 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-28) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

### PERMIT UNIT REQUIREMENTS

- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6]
- {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC - 25 ppmv @ 15% O2, CO - 56 ppmv @ 15% O2, PM10 - 0.02 g/hp-hr, or SOx (as SO2) - 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031 D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS. LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN S-2234-130-6. Feb 25 2015 7:53AM - TORID

- 14. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 16. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 17. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 19. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 21. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 24. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies.

  [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-130-6: Feb 25 2015 7:53AM - TORID

- 26. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 29. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 30. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 31. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 32. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 33. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 35. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 36. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 37. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 38. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-130-6: Feb 25 2015 7:53AM-- TORID

- 39. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 40. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 41. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 42. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPM S-2234-130-6: Feb 25 2015 7:53AM – TORID

**PERMIT UNIT:** S-2234-131-6

SECTION: 26 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-29) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

#### PERMIT UNIT REQUIREMENTS

- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District 1. Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6] 3.
- {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC - 25 ppmv @ 15% O2, CO - 56 ppmv @ 15% O2, PM10 - 0.02 g/hp-hr, or SOx (as SO2) - 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. District Rule 22011 Federally Enforceable Through Title V Permit
- 13. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Location: GAS PLANT,S S-2234-131-6: Feb 25 2015 7:53AM -- TORID GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC

- 14. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 16. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 17. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 19. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 21. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 24. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies.

  [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CAS-2234-131-6: Feb 25 2015 7:53AM—TORID

- 26. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 28. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 29. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 30. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 31. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 32. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 33. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 35. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 36. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
CES ELK HILLS, LLC

- 37. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 38. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 39. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 40. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 41. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 42. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUP S-2234-131-6: Feb 25 2015 7:53AM -- TORID

PERMIT UNIT: S-2234-132-6

SECTION: 26 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-30) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

#### PERMIT UNIT REQUIREMENTS

- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6] 3.
- 4. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier, [District Rule 2201] Federally Enforceable Through Title V Permit
- The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmy @ 15% O2, VOC - 25 ppmv @ 15% O2, CO - 56 ppmv @ 15% O2, PM10 - 0.02 g/hp-hr, or SOx (as SO2) - 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr, [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031 D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN

Location: S-2234-132-6 : Feb 25 2015 7:53AM -- TORIC

- 14. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 16. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 17. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 19. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 21. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 24. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies.

  [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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CES ELK HILLS, LLC

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA \$2234-132-6. Feb 25 2015 7:53AM -- TORID

- 26. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 29. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 30. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 31. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 32. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 33. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 35. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 36. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 37. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-132-6: Feb 25 2015 7:53AM -- TORID

- 38. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 39. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 40. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 41. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 42. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E,T S-2234-132-6: Feb 25 2015 7:53AM - TORIO

PERMIT UNIT: S-2234-134-6

SECTION: 36 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-32) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

#### PERMIT UNIT REQUIREMENTS

- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6] 3.
- 4. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC - 25 ppmv @ 15% O2, CO - 56 ppmv @ 15% O2, PM10 - 0.02 g/hp-hr, or SOx (as SO2) - 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031 D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA 2234-134-6 : Feb 25 2015 7:53AM -- TORIC

Location

- 14. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 16. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 17. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 19. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 21. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 24. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies.

  [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
CES ELK HILLS, LLC

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC VILL Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-134-6; Feb 25 2015 7:55AM -- TORID

- 26. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 28. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 29. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 30. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 31. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 32. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 33. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 35. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 36. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

CES ELK HILLS, LLC

- 37. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 38. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 39. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 40. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 41. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 42. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TU S-2234-134-6: Feb 25 2015 7:53AM - TORIO

**PERMIT UNIT:** S-2234-136-5

SECTION: 29 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-34) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

#### PERMIT UNIT REQUIREMENTS

- 1. Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 2. Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6]
- 4. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- 5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- 6. IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 7. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC 25 ppmv @ 15% O2, CO 56 ppmv @ 15% O2, PM10 0.02 g/hp-hr, or SOx (as SO2) 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- 9. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031 D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC

Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CAS-2234-136-5: Feb 25 2015 7:53AM – TORID

- 14. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 16. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 17. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 19. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 21. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 24. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies.

  [District Rule 4702] Federally Enforceable Through Title V [Permit]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
CES ELK HILLS, LLC

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-138-5 - Feb 25 2015 7.53AM -- TORID

- 26. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 29. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 30. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 31. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 32. All records shall be maintained, retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4702, 6.2.1 and 6.2.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPM. S-2234-136-5: Feb 25 2015 7:53AM -- TORID

**PERMIT UNIT:** S-2234-137-7

SECTION: 27 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-35) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234 (COMPLIANT DORMANT EMISSIONS UNIT)

### PERMIT UNIT REQUIREMENTS

- While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- A source test to demonstrate compliance with NOx, CO and VOC emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- Permittee shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant 3. emissions unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District 4. Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6] 6.
- {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap 7. (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC - 25 ppmv @ 15% O2, CO - 56 ppmv @ 15% O2, PM10 - 0.02 g/hp-hr, or SOx (as SO2) - 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.11 Federally Enforceable Through Title V Permit
- 12. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

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Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA

Location: GAS PLANT,S \$-2234-137-7 : Feb 25 2015 7:53AM -- TORID

- 14. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702] Federally Enforceable Through Title V Permit
- 19. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months unless the unit is in dormant status. [District Rule 2201 and 4702] Federally Enforceable Through Title V Permit
- 20. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) -EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmy, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 24. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 26. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC

Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUBMAN, CA S-2234-137-7: Feb 25 2015 7:53AM - TORID

- 27. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28. Alternate monitoring shall not be required while unit is in dormant status, but shall resume upon recommencing operation of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 29. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
- 30. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 31. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 32. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
- 33. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 34. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 35. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, S-2234-137-7: Feb 25 2015 7:53AM -- TORID

## ATTACHMENT B Authorities to Construct





**ISSUANCE DATE: 10/15/2014** PERMIT NO: S-2234-126-6

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS. LLC

MAILING ADDRESS:

PO BOX 1001

**TUPMAN, CA 93276** 

LOCATION:

**GAS PLANT** 

SECTION SE-35, T-30S, R-23E

TUPMAN, CA

RANGE: 23E **SECTION: 35 TOWNSHIP: 30S** 

#### **EQUIPMENT DESCRIPTION:**

MODIFICATION OF 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-21) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234 (COMPLIANT DORMANT EMISSIONS UNIT): REMOVE DAILY FUEL USE LIMIT AND ADD ANNUAL FUEL USE LIMIT

## CONDITIONS

- The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures 1. of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
- When this unit is not operated, the fuel line shall be physically disconnected from this unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- A source test to demonstrate compliance with NOx, CO and VOC emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- Permittee shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

#### CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

- 7. This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6]
- 8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- 9. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- 10. IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC 25 ppmv @ 15% O2, CO 56 ppmv @ 15% O2, PM10 0.02 g/hp-hr, or SOx (as SO2) 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- 13. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months unless the unit is in dormant status. [District Rule 2201 and 4702] Federally Enforceable Through Title V Permit
- 21. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

- 23. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 25. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 27. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 28. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29. Alternate monitoring shall not be required while unit is in dormant status, but shall resume upon recommencing operation of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 30. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
- 31. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 32. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit

- 33. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
- 34. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 35. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 36. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 37. All records shall be maintained, retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4702, 6.2.1 and 6.2.2] Federally Enforceable Through Title V Permit





**ISSUANCE DATE: 10/15/2014** PERMIT NO: S-2234-129-6

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS. LLC PO BOX 1001

MAILING ADDRESS:

**TUPMAN, CA 93276** 

LOCATION: **GAS PLANT** 

SECTION SE-35, T-30S, R-23E

TUPMAN, CA

RANGE: 23E **SECTION: 29 TOWNSHIP: 30S** 

**EQUIPMENT DESCRIPTION:** 

MODIFICATION OF 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-27) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234: REMOVE DAILY FUEL USE LIMIT AND ADD ANNUAL FUEL USE LIMIT

#### CONDITIONS

- The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 22011 Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6]
- The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

#### CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

- 7. IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- 9. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC 25 ppmv @ 15% O2, CO 56 ppmv @ 15% O2, PM10 0.02 g/hp-hr, or SOx (as SO2) 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- 10. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 17. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 18. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 20. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit

- 22. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 24. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 25. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702, 5.6.1 and 5.6.9] Federally Enforceable Through Title V Permit
- 29. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 30. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 31. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit

- 32. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 33. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 35. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 36. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 37. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 38. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 39. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 40. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 41. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 42. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit





**PERMIT NO:** S-2234-130-5 **ISSUANCE DATE:** 10/15/2014

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS: PO BOX 1001

TUPMAN, CA 93276

LOCATION: GAS PLANT SECTION SE-35, T-30S, R-23E

TUPMAN, CA

SECTION: 28 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

MODIFICATION OF 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-28) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234: REMOVE DAILY FUEL USE LIMIT AND ADD ANNUAL FUEL USE LIMIT

### CONDITIONS

- 1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
- 2. Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6]
- 5. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- 6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

#### CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

- 7. IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- 9. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC 25 ppmv @ 15% O2, CO 56 ppmv @ 15% O2, PM10 0.02 g/hp-hr, or SOx (as SO2) 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- 10. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 17. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 18. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 20. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit

- 22. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 24. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 25. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 30. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 31. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 32. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit

- 33. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 35. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 36. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 37. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 38. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 39. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 40. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 41. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 42. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit





**ISSUANCE DATE: 10/15/2014** 

## **AUTHORITY TO CONSTRUCT**

PERMIT NO: S-2234-131-5

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS. LLC

MAILING ADDRESS: PO BOX 1001

WAILING ADDRESS: PO BOX 1001

TUPMAN, CA 93276

LOCATION: GAS PLANT

SECTION SE-35, T-30S, R-23E

TUPMAN, CA

SECTION: 26 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

MODIFICATION OF 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-29) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234: REMOVE DAILY FUEL USE LIMIT AND ADD ANNUAL FUEL USE LIMIT

#### CONDITIONS

- 1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
- 2. Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6]
- 5. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- 6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

#### CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

- 7. IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- 9. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC 25 ppmv @ 15% O2, CO 56 ppmv @ 15% O2, PM10 0.02 g/hp-hr, or SOx (as SO2) 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- 10. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 17. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 18. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 20. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit

- 22. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 24. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 25. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 29. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 30. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 31. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 32. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 33. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

- 35. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 36. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 37. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 38. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 39. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 40. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 41. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit





PERMIT NO: S-2234-132-5

**ISSUANCE DATE: 10/15/2014** 

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

**MAILING ADDRESS:** 

PO BOX 1001

**TUPMAN, CA 93276** 

LOCATION:

**GAS PLANT** 

**SECTION SE-35, T-30S, R-23E** 

TUPMAN, CA

**SECTION: 26 TOWNSHIP: 30S** 

RANGE: 23E

#### **EQUIPMENT DESCRIPTION:**

MODIFICATION OF 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-30) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234: REMOVE DAILY FUEL USE LIMIT AND ADD ANNUAL FUEL USE LIMIT

#### CONDITIONS

- The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures 1. of District Rule 2520, [District Rule 2520] Federally Enforceable Through Title V Permit
- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 22011 Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6]
- The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

#### CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

- 7. IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- 9. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC 25 ppmv @ 15% O2, CO 56 ppmv @ 15% O2, PM10 0.02 g/hp-hr, or SOx (as SO2) 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- 10. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 17. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 18. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 20. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit

- 22. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 24. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 25. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 30. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 31. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 32. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

- 33. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 35. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 36. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 37. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 38. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 39. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 40. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 41. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit





PERMIT NO: S-2234-136-4 ISSUANCE DATE: 10/15/2014

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS: PO BOX 1001

TUPMAN, CA 93276

LOCATION: GAS PLANT

SECTION SE-35, T-30S, R-23E

TUPMAN, CA

SECTION: 29 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

MODIFICATION OF 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-34) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234: REMOVE DAILY FUEL USE LIMIT AND ADD ANNUAL FUEL USE LIMIT

### **CONDITIONS**

- 1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
- 2. Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6]
- 5. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- 6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

#### CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

- 7. IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- 9. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC 25 ppmv @ 15% O2, CO 56 ppmv @ 15% O2, PM10 0.02 g/hp-hr, or SOx (as SO2) 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- 10. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 17. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 18. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 20. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit

- 22. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 24. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 25. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies.

  [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 30. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 31. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 32. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit

33. All records shall be maintained, retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4702, 6.2.1 and 6.2.2] Federally Enforceable Through Title V Permit





PERMIT NO: S-2234-137-6

**ISSUANCE DATE: 10/15/2014** 

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

**MAILING ADDRESS:** 

PO BOX 1001

**TUPMAN, CA 93276** 

LOCATION:

**GAS PLANT** 

SECTION SE-35, T-30S, R-23E

TUPMAN, CA

**SECTION: 27 TOWNSHIP: 30S** 

RANGE: 23E

#### **EQUIPMENT DESCRIPTION:**

MODIFICATION OF 1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-35) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234 (COMPLIANT DORMANT EMISSIONS UNIT): REMOVE DAILY FUEL USE LIMIT AND ADD ANNUAL FUEL USE LIMIT

## CONDITIONS

- The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures 1. of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
- While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- A source test to demonstrate compliance with NOx, CO and VOC emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- Permittee shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

#### CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

- 7. This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6]
- 8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- 9. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- 10. IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC 25 ppmv @ 15% O2, CO 56 ppmv @ 15% O2, PM10 0.02 g/hp-hr, or SOx (as SO2) 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- 13. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. The fuel consumption limit for this engine shall not exceed 88.184 MMscf/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months unless the unit is in dormant status. [District Rule 2201 and 4702] Federally Enforceable Through Title V Permit
- 21. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

- 23. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 25. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 27. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 28. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29. Alternate monitoring shall not be required while unit is in dormant status, but shall resume upon recommencing operation of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 30. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
- 31. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 32. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit

- 33. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
- 34. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 35. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 36. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit

## ATTACHMENT C

## **Emissions Increases**

SSIPE (lb/yr)				
NOx	VOC	CO	SOx	PM10
0	0	0	0	0

# ATTACHMENT D Previous Title V Operating Permits

## San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-2234-126-4 EXPIRATION DATE: 10/31/2016

SECTION: 35 TOWNSHIP: 30S RANGE: 23E

#### **EQUIPMENT DESCRIPTION:**

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-21) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234 (COMPLIANT DORMANT EMISSIONS UNIT)

## PERMIT UNIT REQUIREMENTS

- By October 19, 2012, the owner/operator shall submit an Authority to Construct (ATC) permit application to the District to comply with 40 CFR 63, ZZZZ. [District Rule 2010] Federally Enforceable Through Title V Permit
- By July 1, 2012, the operator shall submit to the APCO an APCO-approvable emission control plan of all actions to be taken to satisfy the emission requirements of Section 5.2 of District Rule 4702. If there is no change to the previouslyapproved emission control plan, the operator shall submit a letter to the District indicating that the previously approved plan is still valid. [District Rule 4702, 6.1 and 7.5] Federally Enforceable Through Title V Permit
- When this unit is not operated, the fuel line shall be physically disconnected from this unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- A source test to demonstrate compliance with NOx, CO and VOC emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- Permittee shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6] Federally Enforceable Through Title V Permit
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- 10. IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC - 25 ppmv @ 15% O2, CO - 56 ppmv @ 15% O2, PM10 - 0.02 g/hp-hr, or SOx (as SO2) - 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT,S S-2234-126-4 : Feb 25 2015 7:52AM -- TORID GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA

- 13. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. The fuel consumption limit for this engine shall not exceed 241,600 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months unless the unit is in dormant status. [District Rule 2201 and 4702] Federally Enforceable Through Title V Permit
- 21. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing, [District Rule 1081] Federally Enforceable Through Title V Permit
- 23. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) -EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmy, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 25. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 27. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS. LLC

Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-126-4; Feb 25 2015 7:52AM -- TORID

- 28. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29. Alternate monitoring shall not be required while unit is in dormant status, but shall resume upon recommencing operation of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 30. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
- 31. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 32. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 33. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
- 34. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 35. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 36. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 37. All records shall be maintained, retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4702, 6.2.1 and 6.2.2] Federally Enforceable Through Title V Permit

**PERMIT UNIT:** S-2234-129-5 **EXPIRATION DATE:** 10/31/2016

SECTION: 29 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-27) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

#### PERMIT UNIT REQUIREMENTS

- 1. Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 2. Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6]
- 4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- 5. IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- 7. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC 25 ppmv @ 15% O2, CO 56 ppmv @ 15% O2, PM10 0.02 g/hp-hr, or SOx (as SO2) 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- 8. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 9. The fuel consumption limit for this engine shall not exceed 241,600 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-129-5: Feb 25 2015 7:52AM - TORID

- 13. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 15. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 16. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 18. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 19. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 20. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 22. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 23. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

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- 25. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702, 5.6.1 and 5.6.9] Federally Enforceable Through Title V Permit
- 27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 28. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070]
- 29. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 30. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 31. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 32. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40] CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 33. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the nonstartup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 35. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 36. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 37. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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- 38. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 39. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 40. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 41. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit

**PERMIT UNIT:** S-2234-130-4 **EXPIRATION DATE:** 10/31/2016

SECTION: 28 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-28) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

#### PERMIT UNIT REQUIREMENTS

- 1. Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 2. Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6]
- 4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- 5. IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- 7. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC 25 ppmv @ 15% O2, CO 56 ppmv @ 15% O2, PM10 0.02 g/hp-hr, or SOx (as SO2) 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- 8. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 9. The fuel consumption limit for this engine shall not exceed 241,600 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit

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- 13. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 15. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 16. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 18. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 19. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 20. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 22. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 23. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

- 25. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 28. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070]
- 29. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 30. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 31. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 32. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 33. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the nonstartup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 35. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 36. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 37. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC

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- 38. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 39. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 40. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 41. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit

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**PERMIT UNIT:** S-2234-131-4 **EXPIRATION DATE: 10/31/2016** 

SECTION: 26 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-29) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

#### PERMIT UNIT REQUIREMENTS

- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District 1. Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6] 3.
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC - 25 ppmv @ 15% O2, CO - 56 ppmv @ 15% O2, PM10 - 0.02 g/hp-hr, or SOx (as SO2) - 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.11 Federally Enforceable Through Title V Permit
- Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- The fuel consumption limit for this engine shall not exceed 241,600 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

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- 13. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 15. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 16. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 18. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) -EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 19. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 20. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 22. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 23. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

- 25. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 26. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 27. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 28. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the nonstartup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 29. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 30. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 31. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 32. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 33. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 35. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-131-4 : Feb 25 2015 7:52AM - TORID

- 36. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 37. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 38. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070]
- 39. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 40. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 41. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit

**EXPIRATION DATE: 10/31/2016** PERMIT UNIT: S-2234-132-4

RANGE: 23E **SECTION:** 26 **TOWNSHIP:** 30S

**EQUIPMENT DESCRIPTION:** 

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-30) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

#### PERMIT UNIT REQUIREMENTS

- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District 1. Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6] 3.
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V **Permit**
- The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC - 25 ppmv @ 15% O2, CO - 56 ppmv @ 15% O2, PM10 - 0.02 g/hp-hr, or SOx (as SO2) - 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- The fuel consumption limit for this engine shall not exceed 241,600 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-132-4 : Feb 25 2015 7:52AM - TORID

- 13. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 15. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 16. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 18. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) -EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 19. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 20. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 22. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 23. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC

Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-132-4 Feb 25 2015 7:52AM - TORID

- 25. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 28. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 29. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40] CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 30. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the nonstartup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 31. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 32. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 33. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 35. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 36. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC

Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA 5-2234-132-4: Feb 25 2015 7:52AM – TORID

- 37. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 38. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070]
- 39. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 40. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 41. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-132-4: Feb 25 2015 7:52AM – TORID

**EXPIRATION DATE: 10/31/2016** PERMIT UNIT: S-2234-134-4

SECTION: 36 TOWNSHIP: 30S RANGE: 23E

**EQUIPMENT DESCRIPTION:** 

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-32) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

#### PERMIT UNIT REQUIREMENTS

- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District 1. Rule 22011 Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6] 3.
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V
- The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC - 25 ppmv @ 15% O2, CO - 56 ppmv @ 15% O2, PM10 - 0.02 g/hp-hr, or SOx (as SO2) - 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- The fuel consumption limit for this engine shall not exceed 241,600 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-134-1; Feb 25 2015 7:52AM -- TORID

- 13. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 15. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 16. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 18. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) -EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 19. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 20. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 22. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 23. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit
- 24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC

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- 25. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 26. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 27. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 28. The permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 29. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 30. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 31. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 32. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 33. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 34. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
- 35. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed every 2,160 hours of operation or every 12 months, whichever comes first. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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- 36. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 37. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 38. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070]
- 39. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 40. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 41. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ]] Federally Enforceable Through Title V Permit

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PERMIT UNIT: S-2234-136-2 **EXPIRATION DATE: 10/31/2016** 

RANGE: 23E **SECTION**: 29 **TOWNSHIP**: 30S

**EQUIPMENT DESCRIPTION:** 

1.834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-34) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

### PERMIT UNIT REQUIREMENTS

- By October 19, 2012, the owner/operator shall submit an Authority to Construct (ATC) permit application to the District to comply with 40 CFR 63, ZZZZ. [District Rule 2010] Federally Enforceable Through Title V Permit
- By July 1, 2012, the operator shall submit to the APCO an APCO-approvable emission control plan of all actions to be taken to satisfy the emission requirements of Section 5.2 of District Rule 4702. If there is no change to the previouslyapproved emission control plan, the operator shall submit a letter to the District indicating that the previously approved plan is still valid. [District Rule 4702, 6.1 and 7.5] Federally Enforceable Through Title V Permit
- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6] Federally Enforceable Through Title V Permit
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC - 25 ppmv @ 15% O2, CO - 56 ppmv @ 15% O2, PM10 - 0.02 g/hp-hr, or SOx (as SO2) - 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
- 10. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The fuel consumption limit for this engine shall not exceed 241,600 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location:

GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA

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- 13. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The permittee shall install and operate a nonresettable elapsed operating time meter. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
- 17. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 18. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 20. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 22. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 24. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
- 25. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5.9] Federally Enforceable Through Title V Permit

Facility Name: CALIFORNIA RESOURCES ELK HILLS, LLC Location: GAS PLANT, SECTION SE-35, T-30S, R-23E, TUPMAN, CA S-2234-136-2 Feb 25 2015 7:52AM - TORID

- 26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
- 27. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 30. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 31. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 32. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit
- 33. All records shall be maintained, retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4702, 6.2.1 and 6.2.2] Federally Enforceable Through Title V Permit

**PERMIT UNIT:** S-2234-137-3

**EXPIRATION DATE: 10/31/2016** 

RANGE: 23E **SECTION:** 27 **TOWNSHIP:** 30S

#### **EQUIPMENT DESCRIPTION:**

1,834 BHP WAUKESHA MODEL #7042 NATURAL GAS-FIRED IC ENGINE DRIVING A GAS COMPRESSOR (R-35) EQUIPPED WITH NON-SELECTIVE CATALYTIC REDUCTION, AIR/FUEL RATIO CONTROLLER, POSITIVE CRANKCASE VENTILATION, AND OPERATES AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234 (COMPLIANT DORMANT EMISSIONS UNIT)

## PERMIT UNIT REQUIREMENTS

- By October 19, 2012, the owner/operator shall submit an Authority to Construct (ATC) permit application to the District to comply with 40 CFR 63, ZZZZ. [District Rule 2010] Federally Enforceable Through Title V Permit
- By July 1, 2012, the operator shall submit to the APCO an APCO-approvable emission control plan of all actions to be taken to satisfy the emission requirements of Section 5.2 of District Rule 4702. If there is no change to the previouslyapproved emission control plan, the operator shall submit a letter to the District indicating that the previously approved plan is still valid. [District Rule 4702, 6.1 and 7.5] Federally Enforceable Through Title V Permit
- When this unit is not operated, the fuel line shall be physically disconnected from this unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- A source test to demonstrate compliance with NOx, CO and VOC emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- Permittee shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit. [District Rule 4702] Federally Enforceable Through Title V Permit
- Operator shall notify the District by letter or fax at least 48-hours in advance of the re-location of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- Operator shall maintain records of compressor skid location and dates spent at each location and make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
- This unit shall not operate within 1,000 feet of a kindergarten through 12 grade school. [CH&SC 42301.6] Federally Enforceable Through Title V Permit
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- 10. IC engine shall be equipped with air/fuel ratio controller which readily indicates air/fuel ratio setting within tolerance limits as recommended by the catalyst system supplier. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. Emissions from this IC engine shall not exceed any of the following limits: NOx (as NO2) 5 ppmv @ 15% O2, VOC - 25 ppmv @ 15% O2, CO - 56 ppmv @ 15% O2, PM10 - 0.02 g/hp-hr, or SOx (as SO2) - 0.011 g/hp-hr. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

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- 13. Fugitive emissions, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c (Feb 1999), with no leaks greater than or equal to 10,000 ppm, shall not exceed 0.7 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. The fuel consumption limit for this engine shall not exceed 241,600 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The engine shall only burn natural gas with fuel gas sulfur concentration (as H2S) not exceeding 1.0 grains/100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. If the IC engine is fired on PUC-regulated natural gas, the permittee shall retain on file, copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. If the engine is fired on non-PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246 or double GC. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. If the engine is fired on non-PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. The elapsed operating time meter shall be properly maintained in accordance with the manufacturer's specifications. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing to measure the stack NOx, CO, and VOC emissions from this unit shall be conducted not less than once every twelve (12) months unless the unit is in dormant status. [District Rule 2201 and 4702] Federally Enforceable Through Title V Permit
- 21. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
- 22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 23. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) -EPA Method 25A or 25B, or ARB Method 100, ASTM D3246 or double GC for H2S and mercaptans, and EPA Method 21 for fugitive components. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rule 4702, 6.4] Federally Enforceable Through Title V Permit
- 24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. NOx, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702, 6.3,3] Federally Enforceable Through Title V Permit
- 25. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1080] Federally Enforceable Through Title V Permit
- 26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1080] Federally Enforceable Through Title V Permit
- 27. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit

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- 28. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29. Alternate monitoring shall not be required while unit is in dormant status, but shall resume upon recommencing operation of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 30. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
- 31. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
- 32. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
- 33. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
- 34. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1070] Federally Enforceable Through Title V Permit
- 35. This operation shall comply with the requirements of District Rule 4409, as specified on facility wide permit S-2234-0. [District Rule 4409] Federally Enforceable Through Title V Permit
- 36. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type, quantity (cubic feet of gas or gallons of liquid) and sulfur content of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702, 6.2.1] Federally Enforceable Through Title V Permit

# ATTACHMENT E Application



#### OCCIDENTAL OF ELK HILLS, INC.

P. O. Box 1001, 28590 Highway 119, Tupman, California 93276 Telephone 661-763-6000

RECEIVED

OCT 22 2014

SJVAPCD Southern Region

Submitted via email

October 22, 2014

Mr. Leonard Scandura Permit Services Manager San Joaquin Valley APCD - Southern Region 34946 Flyover Court Bakersfield, CA 93308

Subject: Minor Modification to Occidental of Elk Hills, Inc.

Title V Permit (S-2234)

Dear Mr. Scandura:

Occidental of Elk Hills, Inc. (OEHI) requests District approval for an Minor Modification of facility S-2234 Title V Permit to include the below listed Authorities to Construct:

S-2234-126	S-2234-130	S-2234-132	S-2234-134	S-2234-136
S-2234-129	S-2234-131	<del>S-2234-133</del>	<del>S-2234-135</del>	S-2234-137

Please bill OEHI for all administrative costs associated with this request. If you have any questions or require addition information concerning this issue, please contact me directly at (661) 763-5961 or on my cellular phone at (661) 204-9236.

Sincerely,

Raymond Rodriguez

Environmental Consultart

Occidental of Elk Hills, Inc.

cc: Richard F. Garcia, OEHI Kevin Madry, ERM

# TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate bo	x)
[ ] SIGNIFICANT PERMIT MODIFICATION [ X ] MINOR PERMIT MODIFICATION	] ADMINISTRATIVE AMENDMENT
COMPANY NAME: Occidental of Elk Hills, Inc	FACILITY ID: S = 22
Type of Organization:[x] Corporation [] Sole Owners	nip [ ] Government [ ] Partnership [ ] Utility
2. Owner's Name: Occidental of Elk Hills, Inc	
3. Agent to the Owner: Occidental of Elk Hills, Inc.	
II. COMPLIANCE CERTIFICATION (Read each statem	
Based on information and belief formed after reason application will continue to comply with the application	
Based on information and belief formed after reason application will comply with applicable federal requestrain term, on a timely basis.	nable inquiry, the equipment identified in this sirement(s) that will become effective during the
Corrected information will be provided to the Distri information has been submitted.	ct when I become aware that incorrect or incomplete
Based on information and belief formed after reason submitted application package, including all accompacturate and complete.	nable inquiry, information and statements in the panying reports, and required certifications are true
I declare, under penalty of perjury under the laws of the state	,
Signature of Personnible Official	10/22/14 Date
Signature or Responsible Official	Date
George Gough	
Name of Responsible Official (please print)	
Health, Safety and Environment Manager	
Title of Responsible Official (please print)	